

Definite Electro-Chemical Action 171

608. But admitting that chemical action is the source of electricity, what an infinitely small fraction of that which is active do we obtain and employ in our voltaic batteries! Zinc and platina wires, one-eighteenth of an inch in diameter and about half an inch long, dipped into dilute sulphuric acid, so weak that it is not sensibly sour to the tongue, or scarcely to our most delicate test papers, will evolve more electricity in one-twentieth of a minute (595) than any man would willingly allow to pass through his body at once. The chemical action of a grain of water upon four grains of zinc can evolve electricity equal in quantity to that of a powerful thunder-storm (603, 596). Nor is it merely true that the quantity is active; it can be directed and made to perform its full equivalent duty (602, etc.). Is there not, then, great reason to hope and believe that, by a closer *experimental* investigation of the principles which govern the development and action of this subtile agent, we shall be able to increase the power of our batteries, or invent new instruments which shall a thousandfold surpass in energy those which we at present possess?

609. Here for a while I must leave the consideration of the *definite chemical action of electricity*. But before I dismiss this series of *Experimental Researches*, I would call to mind that, in a former series, I showed the current of electricity was also *definite in its magnetic action* (102, 103, 112, 113); and, though this result was not pursued to any extent, I have no doubt that the success which has attended the development of the chemical effects is not more than would accompany an investigation of the magnetic phenomena.

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